

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Oron YACOBY-ZEEVI et al

Serial No .:

10/645,659

Filed:

August 22, 2003

For:

Heparanase Activity Neutralizing Anti-Heparanase

Monoclonal Antibody And Other Anti-Heparanase

Antibodies

Examiner:

DIBRINO, MARIANNE NMN

Mail Stop Amendement Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 Group Art Unit: 1644

Attorney

§ §

Docket: 26128

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a PTO Form 1449 which lists citations which may be material to the patentability and examination of the above identified application. Also enclosed are copies of the references cited. These are submitted in compliance with the duty of disclosure defined in 37 CFR 1.56. The Examiner is requested to make these citations of official record in this application.

This is a continuation in part of U.S. Patent Application No. 10/368,044, filed February 19, 2003, which also claims priority as a continuation from U.S. Patent Application No. 09/186,200, filed November 4, 1998, now U.S. Patent No. 6,562,950, issued May 13, 2003, which is a continuation-in-part of U.S. Patent Application No. 09/071,739, filed May 1, 1998, now U.S. Patent No. 6,177,545, issued January 23, 2001, which is a continuation-in-part of U.S. Patent Application No. 08/922,170, filed September 2, 1997, now U.S. Patent No. 5,968,822, issued October 19, 1999. This application also claims priority from U.S. Patent Application No. 10/456,573, filed June 9, 2003, which is a continuation-in-part of U.S. Patent Application No. 09/435,739, filed November 8, 1999, which is a continuation of U.S. Patent Application No. 09/258,892, filed March 1, 1999, now expired, which is a continuation-in-part of PCT Application No. PCT/US98/17954, filed August 31, 1998, now expired. All of these applications are hereby incorporated by reference as if fully set forth herein.

This Supplemental Information Disclosure Statement under 37 CFR 1.56 is not to be construed as a representation that a search has been made, that additional matter which is material to the examination of this application does not exist, or that any or more of these citations constitutes prior art.

Respectfully submitted,

Martin D. Moynihan

Registration No. 40,338

Dated: December 31, 2006

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Sheet _ 1__ of _3_

IN AN APPLICATION IN AN APPLICATION

(USE SEVERAL SHEETS IF NECESSARY)

Atty. Docket No. 910/12

Application No. 09/186,200

APPLICANT

Tuvia PERETZ et al

Filing Date

Group Art Unit

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	EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CL ASS	SUB- CLASS	FILING DATE
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Sheet __2__ of __3 Form FTO-1449 (Modified) Atty. Docket No. Application No. 910/12 09/186,200 APPLICANT INFORMATION DISCLOSURE CITATION IN AN APPLICATION Tuvia PERETZ et al (USE SEVERAL SHEETS IF NECESSARY) Filing Date Group Art Unit U.S. PATENT DOCUMENTS **EXAMINER** DOCUMENT DATE NAME **CLASS FILING** SUB-INITIAL NUMBER DATE **CLASS** BA FOREIGN PATENT DOCUMENTS DOCUMENT DATE COUNTRY **CLASS** SUB-CL/SS **TRANSLATION** NUMBER YES NO BB OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.) BC Parish et al, "Evidence that Sulfated Polysaccharides Inhibit Tumor Metastasis b / Blocking Tumor Cell-Derived Heparanase", Int. J. Cancer, 40: 511-517, 1987 BD Vlodavsky et al, "Morphological Appearance, Growth Behavior and Migratory Activity of Human Tumor Cells Maintained on Extracellular Matrix vs. Plastic", Cell, 19: 607-616, 980 BE Vlodavsky et al, "Extracellular Sequestration and Release of Fibroblast Growth I actor: A Regulatory Mechanism?", Trends Biochem. Sci, 16: 268-271, 1991 BF Campbell et al, "Heparain Sulfate-Degrading Enzymes Induce Modulation of Smooth Muscle Phenotype", Exp. Cell Res., 200: 156-167, 1992 BG Lider et al, "Suppression of Experimental Autoimmune Diseases and Prolongatio 1 of Allograft Survival by Treatment of Animals with Heparinoid Inhibitors of T Lymphocyte Heparanase", J. Clin. Invest., 83: 752-756, 1989 Вн Thunberg et al, The Molecular Size of the Antithrombin-Binding Sequence in He parain", FEBS Lett., 117: 203-206, 1980 ВΙ Goldberg et al, "An Improved Method for Determining Proteoglycans synthesized by Chondrocytes in Culture", Connective Tissue Res., 24: 265-275, 1990 BJ Hudson, PJ, "Recombinant Antibody Fragment", Curr. Opin. Biotech., 4: 395-402, 1998 BK Schoepe et al, "Neutralization of Hemolytic and Mouse Lethal Activities of C. Pe:fringens Alpha-Toxin Need Simultaneous Blockage of Two Epitopes by Monoclonal Antibodies", Microbiol. Pathogenesis, 23: 1-10, 1997 BL Chiba et al, "Generation of Neutralizing Antibody to the Reverse Transcriptase of Human Immunodeficiency Virus Type 1 by Immunizing of Mice with an Infectious Vaccinia Virus Recombinant", J. Immunological Methods, 207: 53-60, 1997 ВМ Wong, JF, "Monoclonal Antibodies: Therapeutic Applications Grow in Promise and Number", Genetic Engineering News, July, 1998, pp 23, 49 **EXAMINER** DATE CONSIDERED EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP

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Sheet 3 of 3 Form PTO-1449 (Modified) Atty. Docket No. Application No. 910/12 0 1/186,200 INFORMATION DISCLOSURE CITATION **APPLICANT** IN AN APPLICATION Tuvia PERETZ et al (USE SEVERAL SHEETS IF NECESSARY) Filing Date Gioup Art Unit U.S. PATENT DOCUMENTS **EXAMINER DOCUMENT** DATE NAME CLASS **FILING** SUB-INITIAL NUMBER DATE **CLASS** CA CB CD CE CF CG CH CI CJ FOREIGN PATENT DOCUMENTS DOCUMENT DATE COUNTRY **CLASS** SUB-CLASS TRANSLATION NUMBER YES NO CH OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.) Ċι Sherman-Gold, R., "Monoclonal Antibodies: The Evolution from '80s Magic bu lets to Mature, Mainstream Applications as Clinical Therapeutics", Genetic Engineering News, August, 1997, pp 4, 35 CJ Danheiser, SL, "Rituxin Leads Line Of Hopeful Mab Therapies, yet FDA still has Bulk Manufacture Concerns", Genetic Engineering News, October, 1997, pp 1,6,33,38 CK Rader et al, A Phage Display Approach for Rapid Antibody Humanization: Designed Combinatorial V Gene Libraries", Proc. Natl. Acad. Sci., 95: 8910-8915, 1998 CL Mateo etal, "Humanization of a Mouse Monoclonal Antibody that Blocks the Epi lermal Growth Factor Receptor: Recovery Antagonistic Activity", Imunotechnology, 3: 71-81, 1997 CM CN CO CP **EXAMINER** DATE CONSIDERED EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformation and not considered. Includ ∋ copy of this form

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	Application Number	10/645,659				
	Filing Date	August 22, 2003				
	First Named Inventor	Oron YACOBY-ZEEVI et al				
	Art Unit	1644				
	Examiner Name	DIBRINO, MARIANNE NMN				

Sheet		1 0	-	Attorney Docket Number	26128
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Complete if Known Substitute for form 1449A/PTO Application Number 10/645.659 SUPPLEMENTAL INFORMATION Filing Date August 22, 2003 **DISCLOSURE** First Named Inventor Oron YACOBY-ZEEVI et al STATEMENT BY APPLICANT Art Unit 1644 (use as many sheets as necessary) Examiner Name DIBRINO, MARIANNE NMN 2 Attorney Docket Number 26128 Sheet **U.S. PATENT DOCUMENTS** Cite No. 1 Examiner Document Number Publication Date Name of Patentee or Pages, Columns, Lines, Where MM-DD-YYYY Initials* Applicant of Cited Document Relevant Passages or Relevant Figures Appear Number-Kind Code^{2 (if known)} 38 US-5,360,735 01-1-1994 Weinshank et al. 39 US-2002/0088019 04-4-2002 Yacoby-Zeevi 40 US-5,589,604 12-31-1996 Drohan et al. 41 US-5,700,671 12-23-1997 Prieto et al. 42 US-5,714,345 03-3-1998 Clark 43 US-5,716,817 02-10-1998 T?rnell 44 10-31-2000 Deboer et al. US-6,140,552 45 US-2003/0163836 08-28-2003 Garofalo et al. 46 US-2002/0194625 12-19-2002 Zcharia et al. 47 US-6,190,875 02-20-2001 Ben-Artzi et al. 05-5-2001 Yacobi-Zeevi et al. 48 US-2001/0006630 49 US-2002/0114801 08-22-2002 Pecker et al. 50 US-6,475,763 05-5-2002 Ayal-Hershkovitz et al. US-6,426,209 07-30-2002 51 Ayal-Hershkovitz et al. 52 US-2002/0168749 11-14-2002 Pecker et al. 53 US-2003/0068806 04-10-2003 Ayal-Hershkovitz et al. 54 US-2003/0031660 02-13-2003 Yacobi-Zeevi et al. 55 08-22-1989 Nicholson et al. US-4,859,581 56 US-4,882,318 11-21-1989 Vlodavsky et al. 57 US-5,129,877 07-14-1992 Gallo et al. 58 US-5,206,223 04-27-1993 Vlodavsky et al 59 07-26-1994 US-5,332,812 Nicolson et al. US-5,362,641 08-8-1994 Fuks et al. 60 61 US-5,399,351 03-21-1995 Leshchiner et al 08-27-1996 US-5,550,116 62 Lormeau et al. US-5,667,501 09-16-1997 63 Fowler et al.

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Complete if Known Substitute for form 1449A/PTO Application Number 10/645,659 SUPPLEMENTAL INFORMATION Filing Date August 22, 2003 DISCLOSURE Oron YACOBY-ZEEVI et al First Named Inventor STATEMENT BY APPLICANT Group Art Unit 1644 DIBRINO, MARIANNE NMN (use as many sheets as necessary) **Examiner Name** Attorney Docket Number of Sheet OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the Cite Examiner item (book, magazine, journal, serial symposium, catalog, etc.) date, page(s), volume-issue number(s), T^2 No.1 Initials publisher, city and/or country where published. 109 Abrahamsohn et al. "Implantation and Decidualization in Rodents", J. Exp. Zool., 266(6): 603-628, 1993. Abstract. Yoshida "Effects of Basic Fibroblast Growth Factor on the Development of Mouse 110 Preimplantation Embryos", Nippon Sanka Fujinka Gakkai Zasshi, 48(3): 170-176, 1996. Abstract. Watson et al. "A Growth Factor Phenotype Map for Ovine Preimplantation 111 Development", Biology of Reproduction, 50(4): 725-733, 1994. Abstract. Carlone et al. "Embryonic Modulation of Basic Fibroblast Growth Factor in the Rat 112 Uterus", Biology of Reproduction, 49(4): 653-665, 1993. 113 Wordinger et al. "The Immunolocalzation of Basic Fibroblast Growth Factor in the Mouse Uterus During the Initial Stages of Embryo Implantation", Growth Factors, 11(3): 175-186, 1994. Abstract. 114 Schultz et al. "Growth Factors in Preimplantation Mammalian Embryos", Oxford Review of Reproduction in Biology, 15: 43-81, 1993. Abstract. Richardson et al. "Regulation of Basic Fibroblast Growth Factor Binding and 115 Avtivity by Cell Density and Heparan Sufate", J. Biological Chemistry, 274(19): 13534-13540, 1990. Hayward et al. "Cellular Mechanisms of Heparinase III Protection in Rat Traumatic 116 Shock", American Journal of Physiology, 275: H23-H30, 1998. 117 Sasisekharan et al. "Heparinase Inhibits Neovascularization", Proc. Natl. Acad.Sci. USA, 91: 1524-1528, 1994. 118 Whitelock et al. "The Degradation of Human Endothelial Cell-Derived Perlecan and Release of Bound Basic Fibroblast Growth Factor by Stromelysin, Collagenase, Plasmin, and Heparanases", Journal of Biological Chemistry, 271(17): 10079-10086, 119 Godder et al. "Heparanase Activity in Cultured Endothelial Cells", Journal of Cellular Physiology, 148: 274-280, 1991. Kato et al. "Physiological Degradation Converts the Soluble Syndecan-1 Ectodomain 120 From An Inhibitor to A Potent Activator of FGF-2", Nature Medicine, 4(6): 691-697, Jin et al. "Immunochemical Localization of Heparanase in Mouse and Human 121 Melanomas", International Journal of Cancer, 45: 1088-1095, 1990. 122 Oldberg et al. "Characterization of A Platelet Endoglycosidase Degrading Heparin-Like Polysaccharides", Biochemistry, 19: 5755-5762, 1980. 123 Miyake et al. "Highly Specific and Sensitive Detection of Malignancy in Urine Samples From Patients With Urothelial Cancer by CD44v8-10/CD44v10

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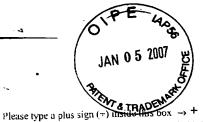
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